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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,998	09/28/2001	Darren J. Cepulis	200302230-1	4844

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EXAMINER
CHEN, TSE W

ART UNIT	PAPER NUMBER
2116	

DATE MAILED: 11/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No. 09/965,998	Applicant(s) CEPULIS ET AL.
	Examiner Tse Chen	Art Unit 2116

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>29 August 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>17,18 and 30-33</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>17,18 and 30-33</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 08-06)   Office Action Summary   Part of Paper No./Mail Date 20060913

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on August 29, 2006 has been entered.

Claim Rejections - 35 USC § 112

2.   Claims 30-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with

the written description requirement. The claim(s) contains subject matter which was not

described in the specification in such a way as to reasonably convey to one skilled in the relevant

art that the inventor(s), at the time the application was filed, had possession of the claimed

invention. Applicant did not disclose the subject matter of "wherein after installation of the

operating system the operating system drivers on the virtual disk drive are overwritten with a

redundant copy of the BIOS". Prior art is still applied.

Findings

1. Madden et al., U.S. Patent 6178503, hereinafter Madden, discloses a method of providing

    operating system drivers [other files] during an operating system installation on a

    computer system [abstract; col.8, ll.54-59].

2. Madden discloses the method comprising storing a first set of operating system drivers

    [other files] operable with a first operating system [OS C 110] in a read only memory

(ROM) [permanent storage 124; col.5, ll.63-66] of the computer system [col.8, ll.47-59; drivers needed for operating system to run are depicted in col.11, l.18 – col.17, l.5].

3. Madden discloses the method comprising storing a second set of operating system drivers operable with a second operating system [OS D 112] in the ROM [col.8, ll.47-59; drivers needed for operating system to run are depicted in col.11, l.18 – col.17, l.5].

4. Madden discloses the method comprising having only operating system drivers operable with the operating system to be installed available for copying [col.8, ll.54-59; only operating system drivers operable with the operating system to be installed will be accessible in the directory as operating system drivers operable with other operating systems are not copied].

5. Madden discloses the method comprising storing a first floppy image having a first set of operating system drivers operable with a first operating system [OS C 110] [col.8, ll.47-59; the image comprising all the files and structural information depicted in col.11, l.18—col.17, l.5], the first floppy image stored in a read only memory (ROM) [permanent storage 124; col.5, ll.63-66] of the computer system.

6. Madden discloses the method comprising storing a second floppy image having a second set of operating system drivers operable with a second operating system [OS D 112] [col.8, ll.47-59, the image comprising all the files and structural information depicted in col.11, l.18—col.17, l.5], the second floppy image stored in the ROM [permanent storage 124; col.5, ll.63-66].

7. Madden discloses the method comprising providing one of the first and second floppy images during the operating system installation [col.8, ll.54-59].

8. Madden discloses the advantage of multiple operating systems is to utilize programs or files that operate under a previous operating system version [col.9, ll.15-26].

9. Agnihotri et al., US 6763456, hereinafter Agnihotri, discloses a method comprising identifying the contents residing on a memory [nvram] by a BIOS routine [col.8, ll.29-38; it is well known in the art to show contents that are files where files represent drivers].

10. Agnihotri discloses a computer system wherein the BIOS programs show the contents that reside in the random access memory [nvram] area of an address space [col.8, ll.29-38].

11. Agnihotri discloses the advantage of identifying the contents of a memory is the facilitation of error handling in emergency situations [col.8, ll.29-55].

12. Alcorn et al., U.S. Patent 6106396, hereinafter Alcorn, discloses a method of providing operating system drivers during an operating system installation on a computer system [fig.1; electronic casino gaming system; col.6, ll.14-29] [col.6, ll.24-29; operating system drivers are required in order for operating systems to operate adequately].

13. Alcorn discloses the method comprising storing the operating system drivers on a read only memory (ROM) [14; 50 and 52] within the computer system, the operating system residing on the ROM as files [col.9, ll.38-44; it is well known in the art that entities such as data, applications and drivers are stored as files for access].

14. Alcorn discloses the method comprising copying at least one of the operating system drivers from a drive [52] of the computer system during the operating system installation by invoking basic input output system (BIOS) routines [col.9, ll.49-56].

15. Alcorn discloses a read only memory (ROM) device [14].

16. Alcorn discloses the ROM device comprising a basic input output system (BIOS) program [col.9, 38-44].

17. Alcorn discloses the ROM device comprising a set of hardware drivers [col.9, 38-44].

18. Alcorn discloses the BIOS program that is adapted to, when executed by a microprocessor [12], make the set of hardware drivers available for copying during installation of an operating system [col.9, ll.49-56] and makes available only the hardware drivers operable with an operating system to be installed [col.9, ll.49-56; os drivers associated with os are installed].

19. Alcorn discloses a computer system [fig.1].

20. Alcorn discloses a computer system comprising a CPU [12].

21. Alcorn discloses a computer system comprising an expansion bus [27] coupled to the CPU.

22. Alcorn discloses a computer system comprising a ROM [14] coupled to the expansion bus, wherein the ROM stores BIOS programs; wherein the BIOS programs of the ROM identifies an operating system to be installed on the computer system during initial BIOS set up [col.9, ll.38-44; bios boot strap identifies the operating system to be installed].

23. Alcorn discloses the advantage of authenticating a computer system is the assurance of system integrity [col.5, ll.43-57].

24. Wu, US Patent 6401140, discloses a method comprising copying at least one of the operating system drivers from a virtual disk drive [virtual option rom] of the computer

system during the operating system installation [col.4, ll.12-51; operating system drivers are needed to operate device].

25. Wu discloses the method of copying at least one of the operating system drivers from a virtual disk drive by invoking basic input output system (BIOS) routines [col.4, ll.12-51].

26. Wu discloses the method of copying at least one of the operating system drivers from a virtual disk drive by accessing the operating system drivers residing on a ROM as files stored on the virtual disk drive by the BIOS routines [col.4, ll.12-51; virtual option rom is built with drivers needed to operate device].

27. Wu discloses a BIOS program that makes the set of hardware drivers [drivers needed to operate devices] available for copying during installation of an operating system by providing the hardware drivers on a virtual disk drive [virtual option ROM] [col.4, ll.12-51].

28. Wu discloses a computer system [fig.1] wherein the BIOS programs of the ROM accesses a virtual floppy drive [virtual option rom] whose contents reside in a memory area of the virtual address space; or implement a virtual disk drive by mapping contents [drivers] to virtual address space of the main memory array, the mapped contents operable in conjunction with an operating system [col.4, ll.12-51; contents of virtual drives are stored in virtual address space to facilitate access as if actual drive exists].

29. Wu discloses a computer system [fig.1] wherein the BIOS programs of the ROM accesses a virtual floppy drive [virtual option rom] whose contents reside in the ROM

area of the virtual address space [col.4, ll.12-51; contents of virtual drives are stored in

virtual address space to facilitate access as if actual drive exists].

30. Wu discloses the advantage of accessing a virtual ROM is the flexibility gained in the

booting process [col.2, ll.50-57].

31. Puckette, U.S. Patent 6385721, discloses a method comprising requesting disk services to

a disk drive [mass storage device 30] by invoking interrupt 13h BIOS services directed

to the disk drive [col.9, ll.37-40].

32. Puckette discloses a method comprising returning a file name for at least one of the

operating system drivers by the interrupt 13h BIOS routines as if the operating system

drivers resided on the disk drive [col.9, ll.37-40; reading boot record enables the reading

of files].

33. Puckette discloses the advantage of Puckette's teaching is the facilitation of determining

whether a disk drive can be accessed [col.9, ll.35-45].

34. Angelo et al., US Patent 5974250, hereinafter Angelo, discloses a computer system

[fig.2] wherein after installation of the operating system the operating system drivers on

the virtual disk drive [eprom] are overwritten with a redundant copy of the BIOS [col.1,

ll.48-57].

35. Angelo discloses the advantage of Angelo's teachings is the updating and restoring of

BIOS while maintaining integrity [col.1, ll.48-57].

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alcorn in view of Wu, Madden and Agnihotri.

In re claims 17-18, Alcorn discloses each and every limitation of the claim as set forth in findings 12-18. Alcorn did not discuss a virtual drive or the use of BIOS routines to show contents of a memory. Wu teaches a method comprising copying at least one of the operating system drivers from a virtual disk drive of the computer system during the operating system installation [findings 24-27] in order to increase flexibility in the booting process [finding 30]. Madden teaches a method comprising storing on the ROM two sets of operating system drivers and having only operating system drivers operable with the operating system to be installed available for copying [findings 1-4] in order to utilize programs or files that operate under a previous operating system version [finding 8]. Agnihotri teaches a method comprising showing the contents residing on a memory by a BIOS routine [finding 9] in order to facilitate error handling in emergency situations [finding 11]. It would have been obvious to one of ordinary skill in the art, having the teachings of Alcorn, Wu, Madden and Agnihotri before him at the time the invention was made, to modify the system taught by Alcorn to include the teachings of Wu, Madden and Agnihotri, in order to obtain the method comprising copying at least one of the operating system drivers from a virtual disk drive of the computer system during the operating system installation by invoking BIOS routines, showing the operating system drivers residing on the ROM as files stored on the virtual disk drive by the BIOS routines, and having only operating system drivers operable with the operating system to be installed available for copying from the

virtual disk drive by showing only the operating system drivers operable with the operating system to be installed as files stored on the virtual disk drive by the BIOS routines. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to increase flexibility in booting according to different operating system version as required and facilitate error handling in emergency situations.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alcorn in view of Wu, and Angelo.

In re claim 30, Alcorn discloses each and every limitation of the claim as set forth in findings 19-22. Alcorn did not discuss a virtual drive or a redundant BIOS. Wu teaches a method comprising using a BIOS program for copying at least one of the operating system drivers from a virtual disk drive of the computer system during the operating system installation [findings 24-29] in order to increase flexibility in the booting process [finding 30]. Angelo teaches a computer system wherein after installation of the operating system the operating system drivers are overwritten with a redundant copy of the BIOS [finding 34] in order to update and restore a BIOS while maintaining integrity [finding 35]. It would have been obvious to one of ordinary skill in the art, having the teachings of Alcorn, Wu, and Angelo before him at the time the invention was made, to modify the system taught by Alcorn to include the teachings of Wu and Angelo, in order to obtain the computer system wherein the BIOS programs of the ROM implement a virtual disk drive by mapping at least some of the operating system drivers to virtual address space of the main memory array, the mapped operating system drivers operable in conjunction with an operating system identified during initial set up of the BIOS; wherein during installation of an operating system on the computer at least one of the operating system drivers is

copied from the virtual disk drive; and wherein after installation of he operating system drivers

on the virtual disk drive are overwritten with a redundant copy of the BIOS. One of ordinary skill

in the art would have been motivated to make such a combination as it provides a way to

increase flexibility in booting according to different operating system version as required and

update and restore a BIOS while maintaining integrity.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alcorn, Wu, and

Angelo in view of Madden and Agnihotri.

In re claim 31, Alcorn, Wu, and Angelo disclose each and every limitation as discussed

above in reference to claim 30. Alcorn, Wu, and Angelo did not disclose explicitly different sets

of operating system drivers. Madden teaches a method comprising storing on the ROM two sets

of operating system drivers and having only operating system drivers operable with the operating

system to be installed available for copying [findings 1-4] in order to utilize programs or files

that operate under a previous operating system version [finding 8]. Agnihotri teaches a method

comprising showing the contents residing on a memory by a BIOS routine [finding 9] in order to

facilitate error handling in emergency situations [finding 11]. It would have been obvious to one .

of ordinary skill in the art, having the teachings of Alcorn, Wu, Angelo, Madden and Agnihotri

before him at the time the invention was made, to modify the system taught by Alcorn, Wu and

Angelo to include the teachings of Madden and Agnihotri, in order to obtain the method wherein

the operating system drivers comprise a first set of operating system drivers for use a first

operating system and a second set of operating system drivers for a second operating system, and

wherein when the BIOS programs implement the virtual disk drive the BIOS programs configure

the virtual disk drive to appear to store only the first set of operating system drivers if the first

operating system is being installed. One of ordinary skill in the art would have been motivated to

make such a combination as it provides a way to increase flexibility in booting according to

different operating system version as required and facilitate error handling in emergency

situations.

4.   Claims 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alcorn et al.,

US Patent 6106396, hereinafter Alcorn, in view of Galasso et al., US Patent 6892304, hereinafter

Galasso.

5.   Alcorn discloses a method comprising:

   • Storing operating system drivers on a ROM [14] within a computer system [fig.1] [col.9,

      ll.38-44].

   • Identifying an operating system to be installed on the computer system, the identifying

      during initial BIOS set up [col.9, ll.38-44; bios boot strap identifies the operating system

      to be installed].

   • Invoking BIOS routines to make available operating system drivers stored on the ROM

      [col.9, ll.49-56].

   • Copying only operating system drivers operable with the identified operating system

      [col.9, ll.49-56; os drivers associated with os are installed *by copying*].

6.   Alcorn did not disclose virtual disk drives.

7.   Galasso discloses a method comprising invoking routines to make available on a virtual

disk drive [virtual memory subsystem] operating system drivers [associated with NT] [col.1,

ll.26-40; operating system drivers residing in operating system virtual memory space in order to

be accessed by operating system].

8.   It would have been obvious to one of ordinary skill in the art, having the teachings of

Alcorn and Galasso before him at the time the invention was made, to incorporate the virtual

disk drive taught by Galasso, in order to obtain the method comprising invoking BIOS routines

to make available on a virtual disk drive operating system drivers stored on the ROM and

copying from the virtual disk drive only operating system drivers operable with the identified

operating system. One of ordinary skill in the art would have been motivated to make such a

combination in order to provide a secured system [Alcorn: col.1, ll.17-44; Galasso: col.1, ll.26-

40].

9.   Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alcorn and

Galasso as applied to claim 32 above, and further in view of Puckette, U.S. Patent 6385721.

10.   Alcorn and Galasso disclose each and every limitation as discussed above. Alcorn and

Galasso did not discuss the details of accessing the virtual disk drive.

11.   Puckette discloses a method wherein invoking comprises invoking interrupt 13h BIOS

routines directed to the disk drive [30] and returning a file name for at least one of the operating

system drivers by the interrupt 13h BIOS routines as if the operating system drivers resided on

the disk drive [col.9, ll.37-40; reading boot record enables the reading of files].

12.   It would have been obvious to one of ordinary skill in the art, having the teachings of

Puckette, Alcorn, and Galasso before him at the time the invention was made, to modify the

system taught by Alcorn and Galasso to include the teachings of Puckette, in order to access the

virtual disk drive of Alcorn and Galasso. One of ordinary skill in the art would have been

motivated to make such a combination as it provides a way to determine whether a [virtual] disk

drive can be accessed [Puckette: col.9, ll.35-45].

Response to Arguments

Applicant's arguments regarding the term "installation" in reference to the arguments filed

May 4, 2006, have been fully considered but they are not persuasive.

Applicant alleges that the position of "installation" that includes "run-time booting of

previously installed operating systems" is inconsistent with the specification as supported by

paragraph 0035 and figure 5. Firstly, absent of any explicit definition in the disclosure regarding

"installation", Examiner submits that installation of an operating system [or any application] in

the broadest interpretation encompasses the copying of appropriate files. Secondly, the cited

support of paragraph 0035 and figure 5 does not indicate "installation" that includes "run-time

booting of previously installed operating systems" to be inconsistent because the cited support is

an embodiment [definition of term should be consistent across all embodiments] that can be

interpreted as performing the overwriting action as an option subsequent to the initial installation

[analogous to saving a document by either overwriting an existing copy or making a copy under

a different name]. Thirdly, Examiner notes Applicant's use of "initial installation" [pg.10 of

Remarks dated May 4, 2006] to particularly distinguish the different kinds of installation. As

such, Examiner holds that the position of "installation" that includes "run-time booting of

previously installed operating systems" is proper and consistent with the specification.

As such, Applicant's arguments are deemed not persuasive and the rejections are
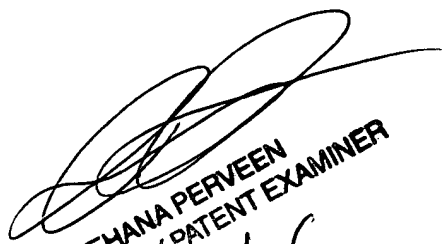
respectfully maintained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tse Chen whose telephone number is (571) 272-3672. The examiner can normally be reached on Monday - Friday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tse Chen
September 16, 2006